

Application Serial No: 10/734,711

Responsive to the Office Action mailed on: March 23, 2007

IN THE CLAIMS

Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-10. (Canceled)

11. (Currently Amended) A method of manufacturing an information recording medium including a substrate and a recording layer disposed above the substrate, the method comprising forming the recording layer by a vapor deposition method,

wherein the recording layer comprises, as constituent elements, Ge, Sb, Te, Sn, and at least one element M selected from Ag, Al, Cr, Mn, and N and is transformed in phase reversibly between a crystal phase and an amorphous phase by an irradiation of an energy beam, and

the recording layer is formed of a material expressed by a composition formula of $[(\text{Ge}, \text{Sn})_A \text{Sb}_2 \text{Te}_{3+A}]_{100-B} \text{M}_B$, where $0 < A \leq 10$, $0 < B \leq 20$, such that A and B each represent an atomic percent and M is at least one of Ag, Al, Cr, Mn or N.

12. (Original) The method of manufacturing an information recording medium according to claim 11, wherein the vapor deposition method is at least one method selected from a vacuum evaporation method, a sputtering method, an ion plating method, a chemical vapor deposition, and a molecular beam epitaxy.

13. (Original) The method of manufacturing an information recording medium according to claim 11, wherein the vapor deposition method is a sputtering method using a gas comprising at least one gas selected from nitrogen gas and oxygen gas and one rare gas selected from argon and krypton.

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14. (Original) The method of manufacturing an information recording medium according to claim 11, wherein the recording layer is deposited at a deposition rate of 0.5 nm/sec to 5 nm/sec.

15. (Original) The method of manufacturing an information recording medium according to claim 11, wherein the recording layer has a thickness of 5 nm to 15 nm.